APPLICANT: KENNETH T. HERUTH AND KEITH A. MIESEL TITLE: COLLECTING SLEEP QUALITY INFORMATION VIA A MEDICAL DEVICE ATTORNEY/AGENT: JASON D. KELLY
REG. NO. 54,213 TELEPHONE: 651.735.1100
DOCKET NO.: 1023-350US01 / P-20196.00 SHEET 1 OF 11 - 12 - 18 ~16B 16A 26 28 -22 30 24

FIG. 1

10 -

20

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10 -**SENSOR** <u>40A</u> 42D -42H 42C 42G 42B 42F 42A 42E 14 16A' 16B 16C THERAPY MODULE <u>44</u> **PROCESSOR SENSOR TELEMETRY** <u>40B</u> <u>46</u> <u>50</u> **MEMORY** <u>48</u>

FIG. 2

TITLE: COLLECTING SLEEP QUALITY INFORMATION VIA A MEDICAL DEVICE

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SHEET 3 OF 11

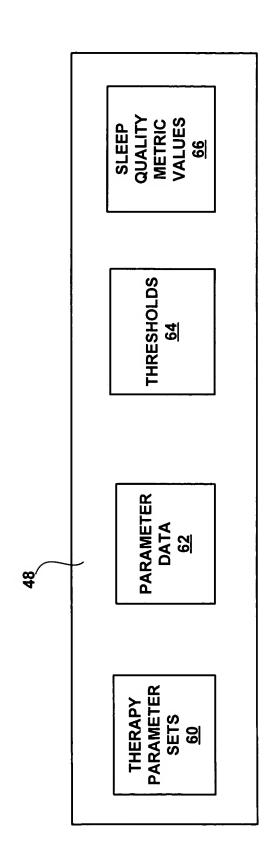


FIG. 3

TITLE: COLLECTING SLEEP QUALITY INFORMATION VIA A MEDICAL DEVICE ATTORNEY/AGENT: JASON D. KELLY REG. NO. 54,213 TELEPHONE: 651.735.1100 DOCKET NO.: 1023-350US01 / P-20196.00 SHEET 4 OF 11 70 MONITOR POSTURE, ACTIVITY, MELATONIN AND/OR FOR PATIENT INDICATION NO **ATTEMPTING TO SLEEP?** YES 74 **IDENTIFY TIME THAT PATIENT BEGINS ATTEMPTING TO** SLEEP 76 **MONITOR PHYSIOLOGICAL PARAMETERS** 78 NO **ASLEEP? YES** 80 **IDENTIFY TIME THAT PATIENT FALLS ASLEEP** 82 **MONITOR PHYSIOLOGICAL PARAMETERS** 84 IDENTIFY AROUSALS, APNEAS, AND TIME OF TRANSITIONS BETWEEN SLEEP STATES 86 NO **PATIENT AWAKE?** YES 88 **IDENTIFY TIME THAT PATIENT AWAKES**

DETERMINE SLEEP QUALITY METRIC VALUES

APPLICANT: KENNETH T. HERUTH AND KEITH A. MIESEL

FIG. 4

90

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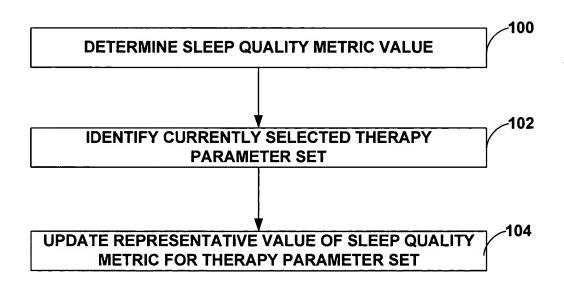


FIG. 5

TITLE: COLLECTING SLEEP QUALITY INFORMATION VIA A MEDICAL DEVICE

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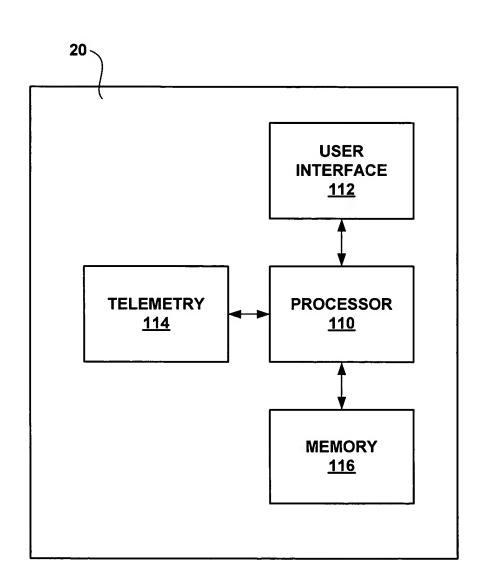


FIG. 6

TITLE: COLLECTING SLEEP QUALITY INFORMATION VIA A MEDICAL DEVICE

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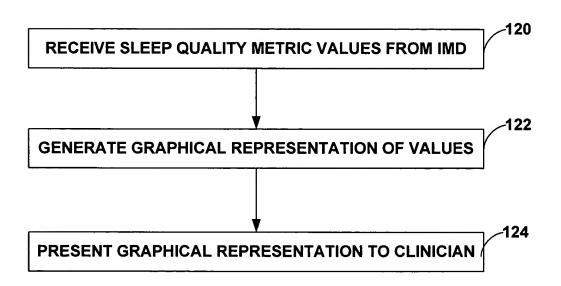


FIG. 7

TITLE: COLLECTING SLEEP QUALITY INFORMATION VIA A MEDICAL DEVICE

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PR = 90Hz PR = 5V PW = 190ms PR = 95Hz	-	<u>PARAMETERS</u> PA = 5.5V	SLEEP EFFICIENCY 85%	SLEEP LATENCY 20 min.	DEEP SLEEP 4 hours
	8	PR = 90Hz PA = 5V PW = 190ms PR = 95Hz	75%	25 min.	3.8 hours
	•••				

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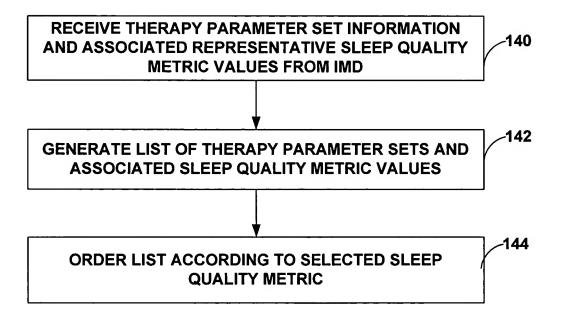


FIG. 9

TITLE: COLLECTING SLEEP QUALITY INFORMATION VIA A MEDICAL DEVICE

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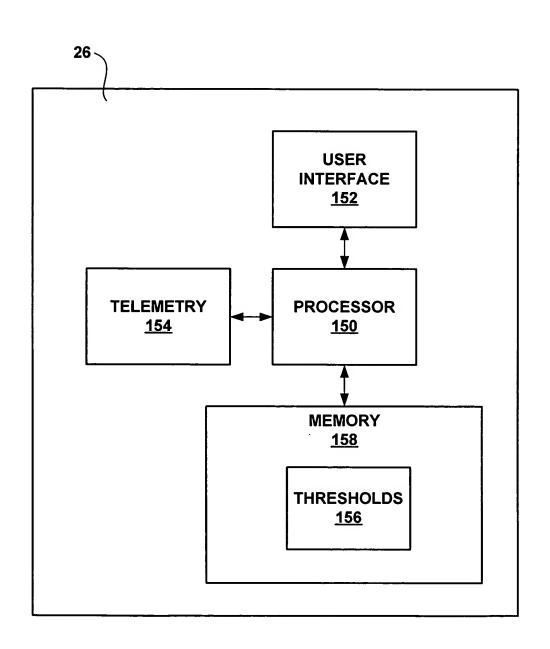


FIG. 10

TITLE: COLLECTING SLEEP QUALITY INFORMATION VIA A MEDICAL DEVICE

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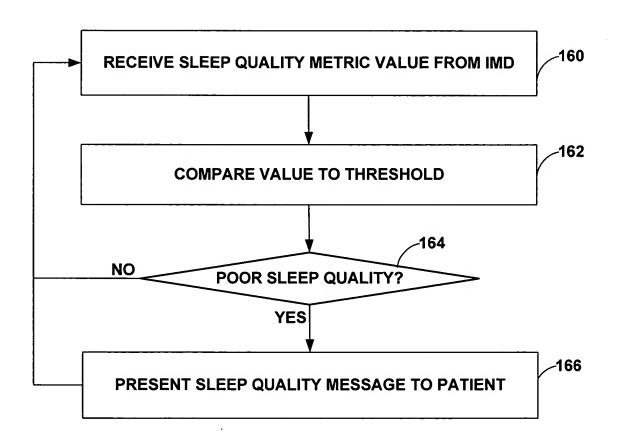


FIG. 11